From: Clasen, Rich L SOPUS-DMW/462
Sent: Monday, March 24, 2014 6:08 PM
To: Mayhew, Scott N SOPUS-DMW/445
Subject: RE: 22RG2 piping volume inventory

Scott,
We collected 658 gallons, not bbls. The volume of the piping was 730 gallons and we assumed that the pump casing held another ½ bbl for a total of 93 gallons lost. Tier II limit was 31 gallons for material based on 100F flash.

From: Mayhew, Scott N SOPUS-DMW/445
Sent: Monday, March 24, 2014 3:06 PM
To: Clasen, Rich L SOPUS-DMW/462
Subject: Re: 22RG2 piping volume inventory

How much did we collect? Are we sure the lines were liquid packed? Also, I thought the Tier II limit for this category release was 1 bbl?

Scott Mayhew
Production Unit Manager - Westside
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On Mar 24, 2014, at 1:24 PM, "Clasen, Rich L SOPUS-DMW/462" <rich.clasen@shell.com> wrote:

> Per Jerry, total collected = 658 bbls
> Lost (piping without pump case- collected) = 72 gallons
> Assume the pump case holds ½ bbl add another 21 gallons.
>
> Threshold for Tier 2 is 31 gallons
>
> ---
>
> **From:** Clasen, Rich L SOPUS-DMW/462
> **Sent:** Monday, March 24, 2014 12:22 PM
> **To:** Byfield, Jerry R SOPUS-DMW/445; Wells, Boyd L SOPUS-DMW/445; Lowe, James A SOPUS-DMW/445
> **Cc:** Deaton, Brian D SOPUS-DMW/445; Mayhew, Scott N SOPUS-DMW/445; Koolwijk, Rein-Jan J SOPUS-DMW/462
> **Subject:** RE: 22RG2 piping volume inventory
>
> Folks,
> I have calculated the volume of the piping to be 730 gallons w/o the pump case. It seems like a lot, but you have 72 linear feet of big piping.
>
> I also discussed what triggers an API Tier 2 with Steve Williams. He said it was 100 kg (roughly 31 gallons) for crude with a flash point >23C (73.4F). I do not think we will be able to accurately collect and transfer the material and have that level of accuracy (material will be left in pipes, cling to the side of the vac truck, help up in the pump, etc.). I believe that we would have a much more accurate estimate if

we knew what depth in the containment basin we had and calculated it from that. I would be happy to do that if someone had the approximate depth and the dimensions of the containment.

I also have a call into Phil to confirm the flash point. I am assuming it is ANS, correct?
Rich

From: Byfield, Jerry R SOPUS-DMW/445
Sent: Monday, March 24, 2014 12:06 PM
To: Wells, Boyd L SOPUS-DMW/445; Lowe, James A SOPUS-DMW/445
Cc: Deaton, Brian D SOPUS-DMW/445; Mayhew, Scott N SOPUS-DMW/445; Clasen, Rich L SOPUS-DMW/462
Subject: 22RG2 piping volume inventory

Boyd and Jim both asked to help find a way to survey the balance of the retain in 22RG2 and the associated piping. The total left in the piping and associated equipment could be used to help determine the true volume that leaked outside primary containment. Noted below are the steps taken to help provide the details needed to make this calculation.
The balance of the crude in the piping was de-inventoried with the use of a vac track. This was accomplished with the use of the 1-1’2” low point drain valves.
The crude received in the truck is to be transferred to totes in a safe place that provides secondary containment. These 280 gal totes provided by Garry Barklind have makings on the side to help identify the volume.
I provided Rich Clasen with a sketch of the pump and all the effected piping. The sketch gives the details related to piping diameter and the length of the piping.
One thing that we lack is a better understanding of the capacity of the pump itself. Still looking for a resource to help us with this question.